

NOTES ON WEST AUSTRALIAN LAND-SHELLS.

By C. HEDLEY, F.L.S., etc.

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THE zoological student finds his subject grouped either fauna by fauna, or family by family, and if choice, or chance confine his attention to one region, he will obtain information more easily from reports arranged geographically than from systematic ones. Local lists are, therefore, particularly acceptable, and the excellent account of the Land-Shells of Western Australia which recently appeared in these Proceedings (*ante*, Vol. I, pp. 84-99), from the pen of Mr. E. A. Smith, is a boon to Australian naturalists. So great is the ever-increasing mass of published observations, that no one cast of the net can ever sweep together all the obscure references afloat in the sea of periodic literature. Glancing over some notes accumulated on Australian snails, I find a few such stray references which have escaped Mr. Smith's attention. Our information about the animals, though scanty, is not quite confined to Quoy and Gaimard's notice of *B. Kingi* and *B. melo*. Semper treated of the latter in the *Reise im Philipp.*; W. G. Binney has described, *Proc. Acad. Nat. Sci. Philadelphia*, 1875, p. 251, pl. xxi. fig. 7, the dentition of *H. convicta*, and I have given some account of the anatomy of *H. perinflata*, *Proc. Roy. Soc. Queensland*, vi, p. 250, pl. xv.

The Elder Exploring Expedition gathered two species of land-shells in Western Australia which may be added to Mr. Smith's list. Between Victoria Spring and Fraser Range a new species was collected, *H. fodinalis*, Tate, *Trans. Roy. Soc. South Australia*, vol. xvi, pt. i, p. 64, pl. i, figs. 1a, 1b, 1c. *H. perinflata* occurred firstly at the Cavenagh Range, secondly about three miles south of Camp 58, and thirdly between Fraser Range and Yilgarn Gold-field. Besides the illustration given (*op. cit.* pl. i, fig. 6) by Mr. Bednall, there is an unquoted figure in Cox's *Monograph of Australian Land-Shells*, pl. xx, fig. 2 of this species. I have also seen specimens of *H. perinflata* from Coolgardie.

Mr. Smith has unfortunately overlooked the figures and descriptions published by Dr. Cox in the *Proc. Linn. Soc. New South Wales*, and reproduced by Mr. Pilsbry, *Man. Conch*, ser. II, vol. viii, pp. 279, 280, pl. lviii, figs. 20, 21, 25, and 26, of *H. Oscarensis* and *H. Derbyi*. It is, I think, evident that he has re-described the former as *H. inconvieta*, Smith, and the latter as *H. Derbyana*, Smith. The locality for the last should be not Burner, but Barrier Range, which, also known as Napier Range, extends north of the Lennard River in about 17° S. lat. by 124° E. long. It is particularly unfortunate that the mistake should be perpetuated in *H. Burnerensis*. This information I owe to Mr. W. W. Froggatt, who collected these three species, and

who has shown me specimens of *H. rectilabrum* and *H. Richardsonii* from the Barrier Range, of *H. Reinga* and *H. Prudhoeensis* from King's Sound, and of *Succinea scalarina* from the Fitzroy River.

From Eucla I have been shown specimens of *H. Angasiana*, Pfr., and *H. cyrtopleura*, Pfr.

Mr. Smith says that no species of *Helicarion* is yet known from this region. In a paper, "Mollusques terrestres nouveaux d'Océanie," published by Mr. C. F. Ancey in *Le Naturaliste*, 1889, p. 19, there occurs a description of *Helicarion Thomsoni*, Ancey, collected by a New Bedford whaler in Geographe Bay.

From an inspection of types I can confirm Mr. Smith's conjecture that *Patula nupera* is an absolute synonym of *P. cuprea*, Cox, which I anticipated, *Man. Conch.*, ser. II, ix, p. 34.

P. Morti is recorded as "the only instance among the Australian Helices in which the same species occurs on both sides of the continent." I have shown, *Proc. Linn. Soc. New South Wales*, ser. II, vii, p. 165, that it shares this distinction with *P. Albanensis*. Of the latter there is an unquoted figure in the *Journal of Conchology*, ii, pl. i, fig. 3.

Judging from the figure of *Bulimus Ponsonbii*, and from the travels of its collector, I am disposed to deny that it is a *Liparus*, or that it comes from Western Australia, but hold it rather to be a variety of *Panda atomata* collected in New South Wales. Among the Bulimi of this province a place should surely be found for *Liparus inflatus* of Lamarck.

In the *Proc. Zool. Soc.* 1872, p. 809, Mr. Brazier corrects the locality of *Liparus physoides* var *Brazieri*, Angas, as follows: "When I sent Mr. Angas the first specimens I marked them Sinclair's Range in error instead of Stirling Range," which extends parallel to the coast about forty miles inland from King George's Sound.

It is to be noted that no modern collector has found either of Benson's two Cyclophori, the existence of which in Australia seems improbable.

Coziella hardly comes within the pale of "land" mollusca, for it inhabits brackish swamps. There are two species differing in range, size, contour, and colour which Mr. Smith has united. A third species has lately been described as fossil by Prof. Tate.

POSTSCRIPT.—Mr. Smith has recorded (*Zoology*, H.M.Ss. "Erebus" and "Terror": Mollusca, p. 2) *Helix virgata* from Foul Point, N.W. Australia. See also Musson, *Proc. Linn. Soc. New South Wales*, ser. II, v, p. 895.—C. H.